

1. (withdrawn) An IC test apparatus comprising:
  - a. a rigid support member having an opening therein, thereby defining a peripheral edge around the opening,
  - b. a polymer membrane attached to the rigid support member and having a center portion covering the opening,
  - c. a probe contact array on the center portion of the polymer membrane,
  - d. a wafer platform,
  - e. means for depressing the center portion of the polymer membrane toward the wafer platform,
  - f. at least one reference IC chip located adjacent to the peripheral edge of the opening in the rigid support,
  - g. interconnection means interconnecting the reference IC chip and the probe contact array.
2. (withdrawn) The apparatus of claim 1 wherein the reference IC chip includes at least one LC circuit.
3. (withdrawn) The apparatus of claim 1 wherein the opening has four sides, the apparatus further comprising a first reference IC chip located adjacent one side and a second IC reference chip located adjacent another side.

4. (withdrawn) The apparatus of claim 1 further including at least one reference component attached to the polymer membrane adjacent to the probe contact array.
5. (withdrawn) The apparatus of claim 4 wherein the reference component comprises an LC circuit.
6. (previously presented) An IC test apparatus comprising:
- a. a rigid support member having an opening therein, thereby defining a peripheral edge around the opening,
  - b. a polymer membrane attached to the rigid support member and having a center portion covering the opening,
  - c. a probe contact array on the center portion of the polymer membrane,
  - d. a wafer platform,
  - e. means for depressing the center portion of the polymer membrane toward the wafer platform,
  - f. at least one reference circuit component attached to the polymer membrane and located adjacent to the probe contact array, and

g. ~~interconnection means address runners~~ interconnecting the reference circuit component and the probe contact array.

7. (previously presented) The apparatus of claim 6 wherein the reference circuit component comprises an LC circuit.

8. (previously presented) The apparatus of claim 7 wherein the reference circuit component ~~comprises is part of~~ a passive IC chip.

9. (previously presented) The apparatus of claim 6 wherein the reference circuit component ~~comprises is part of~~ a digital test circuit.

10. (withdrawn) An IC test apparatus comprising:

- a. a rigid support member having an opening therein, thereby defining a peripheral edge around the opening,
- b. a polymer membrane attached to the rigid support member and having a center portion covering the opening,
- c. a probe contact array on the center portion of the polymer membrane,

- d. a wafer platform,
- e. means for depressing the center portion of the polymer membrane toward the wafer platform,
- f. a reference IC chip attached to the polymer membrane and located adjacent to the probe contact array, and
- g. interconnection means interconnecting the reference component and the probe contact array.

11. (withdrawn) The apparatus of claim 10 wherein the reference IC chip comprises a passive IC chip.

12. (withdrawn) The apparatus of claim 10 wherein the reference IC chip comprises an active IC chip.

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (withdrawn) A method for testing an IC wafer comprising:
- a. mounting a probe membrane on a rigid support member, the rigid support member having an opening therein, and the probe membrane attached to the rigid support member with a center portion thereof covering the opening, the center portion including a probe contact array, and a reference IC,
  - b. mounting a wafer under test on a platform under the opening,
  - c. moving the center portion of the probe membrane so that the probe contact array comes into contact with the wafer under test, and
  - d. passing electrical test signals between I/Os on the wafer under test and a test circuit.
18. (withdrawn) The method of claim 17 wherein the I/Os on the wafer under test and the reference IC comprise a fully functional system.
19. (canceled)